

CALIFORNIA GOLD MINES—MOST VALUABLE DISCOVERIES

ON THE GOLD MINING COMPANIES—No. VI.

HOW OPERATIONS COULD BE CONDUCTED TO A SUCCESSFUL ISSUE.

upon the system of colonial management which I deem most advantageous.

THE PORT PHILLIP GOLD MINING COMPANY.

I further beg most respectfully to observe, that in transactions involving public companies, it is always best for correspondents to sign their names in full. Thus, then know my correspondent, and the directors know their enemy. Straightforward

GOLD WASHING.

GOLD MINING IN AUSTRALIA

GOLD MINING—THE GUEDALLA TESTIMONIAL

THE AUSTRALIAN MUTUAL GOLD CO.

THE AUSTRALIAN MUTUAL GOLD COMPANY.

SECRET

THE PENINSULAR AND ORIENTAL, AND ROYAL MAIL
STEAM-PACKET COMPANIES.

There is, I think, a doubt whatever that Prof. Morse's arrangement is perfectly applicable to carrying on telegraphic intercourse between Great Britain and Ireland, and between Great Britain and France, and in both cases, as matters at present stand, very expensively, and at comparatively modern distances. Distance alone, however, is not a very satisfactory form of objection, that is not to be taken into account almost at a nominal expense, as a reference to Prof. Morse's original description of his arrangement, or its reprint in the periodical I have spoken of, will at once show. The arrangement is, in fact, a very simple one, and is, I think, well adapted to attract the public attention to its merits, by employing this system as a means of communication between the mainland and Osborne House. Whether such means of communication

SUBMARINE TELEGRAPH WITHOUT WIRES

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GALVANIC ELECTRICITY AS A MOTIVE POWER

that it is still an open question, and that further research will be most anxious.

CARRERY WEST MINE, AND ITS MANAGEMENT.—No. II.

PRELIMINARY EXPENSE—MANAGEMENT TO PRESENT DATE.		
Mr. C. M. Brown	\$157	0 11
Mr. W. Knott	100	18 0
Mr. W. White	90	11 0
Mr. D. A. Bingham	174	7 0
Mr. J. Peter	37	16 0
Mr. G. Tindall	95	18 0
Mr. H. Johns	327	19 0
Scotlands	582	19 11
Advertisements	40	0 0
Re-purchase of 690 shares	475	8 9
John Fish, services	21	0 0
Broker's commission on 3790 shares, at 1s.	189	0 0
Mr. McCartney drawing	15	10 4
Mine cost to present month including Capt. H. Thomas's salary	1750	3 10
Mr. St. Pierre Foley, inspecting engineer	204	9 0
Capt. Hosking's salary	44	5 4
Professor White, one visit	50	0 0
Mr. Bingham, one visit	80	0 0
Mr. C. Manley, secretary	268	14 2
Office rent, furniture, stationery, &c.	313	9 11
Cash in hand (about)	150	0 0
Not accounted for	630	0 0
Total subscribed capital		£10,535 0 0

OLD TREWETHER CONSOLIDATED MINING COMPANY.

The most striking point relative to the Old Trewether Mine is this: when underground you cannot fall to be impressed with the extensive nature of the workings of the old men, and when at grass you are at a loss to account for the magnitude and extent of the heaps of rubbish. It is, however, true, as it goes, notwithstanding its size, that the mine has been extremely dry and has produced scarcely anything but ore to the old miners, and it is my firm conviction, that when the engine-shaft has been sunk a few fathoms further, and the levels driven on the holes, that the mine will again be as productive as at any former period. The first shipment of antimony will be made in the course of a few weeks, and as the antimony and lead hitherto taken out are from the old workings solely, no new ground having yet been opened, there is every reason for the shareholders to be satisfied with their prospects. I hope that I have said nothing which may be considered as a public statement, now while it is considered of persons of discretion, instigated by the conflicting reports which have appeared in your columns; and now, apologising for the length of this communication, I beg to subscribe myself,

THE ELECTRIC LIGHT.—M. Regnault, manager of the Rouen telegraph,

ARTIFICIAL INCUBATION.—We have during the week taken the opportunity of inspecting a new, ingenious, and highly successful apparatus for hatching eggs, which is exciting considerable interest among agriculturalists and others well versed in the subject. The arrangement is the result of much attention to artificial hatching, and long study of the process, by Signor Carlo Menni (one of the celebrated pen and ink artists), of Brecknock-place, Camden-town, and consists of a suitable frame, on which is placed a cistern of zinc about an inch in depth, with an area in proportion to the number of eggs to be acted upon; the one we saw in operation was about 4 ft. square, in which were probably 150 eggs undergoing the process.

neath which is a lamp, the flame being supported by the vapour of asphaltum.

in a very ingenious manner, by which it may be safely left for many days without attention. The heat from this lamp passes by a spiral tube through the cistern, and the flat cistern being slightly elevated at the opposite end, a constant stream of thin bed of warm water through it is the result. The eggs to be hatched are placed in a thin bed of dry sand on the upper surface of the cistern, which is covered by a layer of glass, flannel, or other soft material, that of the body of a white chicken is preferred, and the eggs are covered either with a cloth or paper. It is necessary to replace the moisture to replace that which is lost by the evaporation of the eggs by evaporation, and without which life would be destroyed, a series of small tubes from the cistern passes upwards and distributes moisture over the whole surface of the eggs. As soon as the bird breaks through its shell it is fed in a shallow chamber beneath the cistern, the bottom of which, for the first four or five weeks, being corrugated, thus constituting an artificial mother. The chick makes its appearance in three weeks, begins to peck in 24 hours, and when three weeks old it may be allowed in the open air under necessary shelter. It is not necessary to mark the young of their shells during the first day, and it is not necessary to mark in several other eggs, the inmates of which would doubtless make their appearance in an hour or two. With respect to success there can be but one opinion; the average is 50 birds from 100 eggs, but many cases there have occurred of greater proportion. Mr. Woodhouse marked and placed in the incubator 15 eggs, from which he obtained 15 fine birds, also four turkeys, eight weeks old, all of which were hatched. He has produced a fine lot of young of the heracine goose, for the Ornithological Society's exhibition in the Regent's Park, and is so confident of the correctness of his system, that he would undertake to operate on the ostrich, and he would be certain to obtain one. Mr. Minnie has already hatched several orders for machines; and should they get into general use, of which, I think, we have little doubt, it will, by increasing the production of poultry, and by adding to the food of the people, prove of national importance. As personal acquaintance interferes with this gentleman's professional pursuits, the apparatus will be in operation at Brecknock-place only until the 31st October, when it will be removed for exhibition to the Crystal Palace at Sydenham.

BRITISH MINES

taken-away in stoping.

Shares.		Paid.	Last Prices.	Business Done.
100000	Agua Fria	1	7 1/2 - 1 1/2	1 1/2
80000	Anglo-Australian Gold	1	—	—
100000	Anglo-Californian	1	7 1/2 - 1 1/2	—
10000	Australian	1	7 1/2 - 1 1/2	—
20000	Australian	1	7 1/2 - 1 1/2	—
60000	Australian Cordillera	1	7 1/2 - 1 1/2	1 1/2
100000	Australian Freehold	1	7 1/2 - 1 1/2	—
50000	Ave Maria	1	7 1/2 - 1 1/2	—
210000	Carsons Creek	1	—	—
100000	Colonial Gold	1	7 1/2 - 1 1/2	—
300000	Copper Miners of England	Stock	82 - 57	—
8000	Ditto, Preference, 7 1/2 per cent.	25	27 - 29	27 1/2
70000	English and Australian Copper	1	15 - 1 1/2	1 1/2
25000	Fortuna	1	7 1/2 - 1 1/2	—
190000	Great Nitrate Vein	1	7 1/2 - 1 1/2	—
72000	Grand Duchy of Baden	1	7 1/2 - 1 1/2	—
60000	Liberty	1	7 1/2 - 1 1/2	—
60000	Mariposa	1	7 1/2 - 1 1/2	—
20000	Mexican and South American	1	7 1/2 - 1 1/2	—
20000	New Granada	1	7 1/2 - 1 1/2	—
200000	Nouveau Monde	1	7 1/2 - 1 1/2	1 1/2
10000	Pontigbau Silver-Lead	20	15 - 10 1/2	15 1/2
60000	Port Phillip	1	7 1/2 - 1 1/2	—
60000	Quartz Rock	1	7 1/2 - 1 1/2	—
50000	South Australian	1	7 1/2 - 1 1/2	—
70000	Waller	1	7 1/2 - 1 1/2	—
100000	West Mariposa	1	7 1/2 - 1 1/2	—

Shares.	Paid.	Last Prices.	Business Done.
100000 Aqua Fria	1	1/2	1 1/2
80000 Anglo-Australian Gold	1	1/2	1 1/2
100000 Anglo-Californian	1 1/2	1/2	1 1/2
10000 Australasian	1	1/2	1 1/2
20000 Australian	1 1/2	1/2	1 1/2
60000 Australian Cordillera	1	1/2	1 1/2
100000 Australian Freehold	1	1/2	1 1/2
50000 Ave Maria	1	1/2	1 1/2
210000 Carsons Creek	1	1/2	1 1/2
100000 Colonial Gold	1	1/2	1 1/2
30000 Copper Miners of England	Stock	52	57
8000 Ditto, Preference, 7 1/2 per cent.	25	27	29
70000 English and Australian Copper	1	1 1/2	1 1/2
25000 Fortuna	1	1	1 1/2
100000 Great Nugget Vein	1	1 1/2	1 1/2
72000 Grand Duchy of Baden	1	1 1/2	1 1/2
60000 Liberty	1	1 1/2	1 1/2
10000 Mariquita	1	1 1/2	1 1/2
2000 Mexican and South American	1	1 1/2	1 1/2
60000 New Granada	1	1 1/2	1 1/2
200000 Nouveau Monde	1	1 1/2	1 1/2
10000 Pontigaud Silver-lead	20	15 1/2	10 1/2
60000 Port Phillip	1	1 1/2	1 1/2
60000 Santa Rosa	1	1 1/2	1 1/2
50000 South Australian	1	1 1/2	1 1/2
70000 Waller	1	1 1/2	1 1/2
100000 West Mariposa	1	1 1/2	1 1/2

deposited in the lake, and at the same time keep the whole of the quarries periodically dry to a considerable depth. A report of the quarry is in the Mining Correspondent.

it was doubtful if any benefit would arise to the adventurers from its further prosecution. The amount of ground explored is 2053 fms. 4 ft. 10 in., exclusive of ground taken away in stoping.

pay, and the names of the parties said to be shareholders. RICHARDS had gone to Australia. He considered the whole affair a gross conspiracy, and accordingly repudiated it.

RICHARD GILL GLASSON, who had been clerk to Mr. PERMEWAN, was then examined. His evidence fully sustained the grounds on which the claim was raised, but he went even further, for he proved that, in the ledger, Mr. BYRON's account was closed and balanced; that Mr. RICHARDS was credited with the 100 shares returned by Mr. BYRON; and that, when a list of shares held by adventurers, making up 1024, was made out for the meeting in March, 1864, Mr. BYRON's name did not appear in it. The shares transferred to Mr. BYRON have been since sold by Mr. RICHARDS (the seller to BYRON) to another person, without Mr. BYRON signing any transfer. The ledger was in PERMEWAN's possession when GLASSON retired from his employment: the insinuation of its having been carried away surreptitiously recoils upon the author of it. The repudiation by Mr. BYRON had been accepted by PERMEWAN; if the list made out for March be produced, his name would not appear in it. A notice had been served on PERMEWAN to produce this list, but he alleged that it had been also surreptitiously carried off with the ledger. GLASSON subsequently found the same shares re-apportioned to BYRON, and he told Mr. PERMEWAN he was acting dishonestly in so doing, and wrote in his private capacity to Mr. BYRON to apprise him of the facts. Witness made the observations from seeing the fraudulent proceedings of PERMEWAN, and from a fear of being himself implicated.

The learned Judge, in delivering judgment, said, there could be no doubt that Mr. BYRON had accepted the transfer of the shares, but only on certain conditions; and the question was, had these conditions been fulfilled? BYRON met PERREMAN in London, and agreed to give him 35*l.* at the rate of most for 100 102*th* shares. Under this alleged agreement, the transfer is sent, and returned. This is followed by a demand from PERREMAN for 100*l.* for the shares, upon which the defendant repudiates the entire transaction, and declares the whole affair fraudulent. Now, the legal question to be determined is, after that notice, after that repudiation, the mine being hardly formed, and no attempt having been made to enforce the claim against the defendant, for an action has not been brought to make him responsible for the 100 shares, whether Mr. BYRON continues the *bona fide* owner of those shares or not? It was extraordinary, after that repudiation, to place the defendant's name in the cost-book, for it appeared that he never attended a meeting, never signed the cost-book, nor had he, until lately, been called upon for payment. How, then, could it be said that he was a partner in the mine? What had he done to make himself a partner? The reason is not clear why he refused to transfer, but it must be presumed that, having denied the legality of the transfer, he desired to avoid fixing himself with any responsibility by acknowledging it. Judgment must, therefore, be for the defendant.

An application was then made to the Court on the part of the defendant for the expenses of the defendant, who had come down from London, and for his witness, on the ground that Mr. BYRON had written a letter to Mr. BALL disclaiming any connection whatever with the mine, and apprising him that, if he persevered with the action, it would be at his own risk. The expenses of GLASSCOX were strongly objected to, on the plea, that he had broken faith with his employer by secretly corresponding with Mr. BYRON; and he was charged by Mr. PERMEWAN with taking away the ledger, &c. Letters were then produced on the part of Mr. GLASSCOX, written by Mr. PERMEWAN to a Mr. GILBY, of Beverley, in which he requested GILBY to transfer 100 shares which he held to JOHN RICHARDS; that he (PERMEWAN) would put these 100 shares on a man who had taken a like quantity, and refused then to pay for them; that he would free them on him, as he could well afford to pay for them; and that he would relieve GILBY from all responsibility. It was further urged that GLASSCOX was a most important witness. The books had been under his sole charge; and as all the entries had been made in his handwriting, he would, if they had been produced, have been in a position to state whether they had been tampered with or not. It was hinted that had GLASSCOX not been forthcoming, the ledger, and other papers, would have been produced; and in consequence of their non-production, the defendant was enabled to give secondary evidence of their contents through GLASSCOX. The Judge, under these circumstances, granted the application, directing Mr. BALL to pay the expenses forthwith. A sum of 17l. 6s. 6d. was allowed for them, which, added to general costs, will prove a severe penalty, and, we trust, a salutary warning to tradesmen not to allow their names to be made use of in such scandalous transactions.

We have deemed this case of such importance that we have given the facts in detail, with strict impartiality, stripping them of much extraneous matter, and abstaining from allusion to angry observations. The case requires no comments from us—its disclosures speak for themselves; but we may be permitted, on the part of the reputable portion of the mining community, to deplore the occurrence of such transactions, the obvious effect being to disgrace a particular interest, to deteriorate existing property, to destroy commercial confidence, and to depress the spirit of legitimate enterprise. The decision of the Court was in accordance with established authorities, quite consistent with the rules of common sense, and the principles of common honesty.

The smoke nuisance in Glasgow has been the subject of a judicial proceeding, and has occasioned a report of much interest, which we present in a condensed form to our readers. The Procurator Fiscal of the Glasgow Dean of Guild Court having instituted a suit against Messrs. CHARLES TOD and HIGGINBOTHAM, cotton manufacturers, in respect of the smoke nuisance occasioned by the works on their premises in Commercial-road, Hutcheson, town of Glasgow, the Court, on the 2d of March last, made its order in the action pending before them, authorising WILLIAM FAIRBAIRN, C.E., Manchester, JAMES LESLIE, C.E., Edinburgh, and ROBERT JOHNSTON, brickbuilder, Glasgow, to visit, inspect, and report upon the premises. Their report, which is very elaborate, has been furnished to the Court, and in it they describe the state of the works, in reference to the subject of their investigation, as they found them on examination, and the remedies and directions they suggest for removing or abating the nuisance of smoke complained of as arising from them.

The manufactory contains 500 power-looms, worked by a condensing engine of 26-horse power, the cylinder being 28½ inches diameter, 5 feet stroke, making 26 strokes per minute. It is supplied with steam from four boilers, and four furnaces; all these boilers are of the cylindrical construction, with flat ends, excepting one, which has a centre flue. The furnaces are placed immediately under the boilers; the flame, and with it the heated current, or carbonaceous matter, travels the length of the boiler, three times along the bottom and two side flues, before it enters the chimney. In boiler No. 2, constructed differently, having a centre flue, the flame, after passing the bottom, rises into it, and, arriving at the front, separates into two distinct columns, and thence presses onward to the chimney. The boiler, from its enlarged heating surface, is a superior generator of steam to those constructed without internal flues, but defective when compared with others of more modern construction. The consumption of coal, when compared with the power of the engine, was very considerable, and contrasting it with other establishments, it appeared that nearly one-half was wasted; but it was difficult to estimate the quantity used, having no indicator diagrams as a guide, either as regards the vacuum, or the general working condition. Assuming the velocity of the piston to be 360 feet per minute, and the pressure of steam 16 lbs. on the square inch, a force of not less than 75 horses would be the result. The horse-power, in this case, is taken as 33,000 lbs. raised 1 foot high in a minute. Comparing this with the quantity of coal consumed, 40 tons per week, there was found to be the enormous expenditure of 193 lbs. of coal per horse-power per hour, calculated at 75 horses, the assumed power of the engine.

In a well-constructed condensing engine the consumption of coal should not exceed for every purpose 10 lbs. per horse-power per hour, while in our best constructed engines, working expansively, the consumption does not exceed 4 lbs. per horse-power per hour, and when carefully and well-managed, is reduced as low as $2\frac{1}{2}$ to $3\frac{1}{2}$ lbs. Great and unnecessary waste was, therefore, incurred in this comparatively small establishment, and, probably, in many others of the same description in Glasgow, and a wasteful expenditure of fuel is invariably accompanied by its attendant evil, smoke. Considering the load the engine had to overcome and the defective state of the boilers, the examiners were not surprised at the quantity of fuel consumed, or at the annoyance occasioned to the neighbourhood.

The report stated that the defects might be remedied in one of the following ways—1st, By a common circular boiler of sufficient power;—2d, By the introduction of the double flue and double furnace boiler, with alternate firings, which is, probably, a more economical plan than the former;—3d, By the introduction of one of the multitubular boilers, 24 ft. long.

* It is particularly requested that all communications may be addressed—
TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

LONDON, SEPTEMBER 30, 1854.

We alluded in our last Journal to the case of *BALL v. BYRON*, tried before G. G. KEKEWICH, Esq., Judge of the County Court of Penzance. We are now enabled to lay the facts and evidence more fully before our readers, and consider them so important as to merit a further notice. Mr. WILLIAM BALL, of the Union Hotel in that town, brought the action against Mr. ROBERT BYRON, of London, for the recovery of the small sum of 1*l.* 18*s.* 6*d.*, claimed for the hire of a gig, brandy, and tobacco, from the defendant, whose name appeared in the cost-book as a shareholder in the North Ding Dong Mine. Although the amount was inconsiderable, being avowedly an action brought to fix responsibility on an alleged shareholder in a cost-book mine, the case assumed a very different aspect, and the principle which ultimately governed the decision, not by any means new; is one which cannot be too strongly impressed on parties dealing in mining shares. The real plaintiff was Mr. JAMES PERMEWAN, described as a broker and purser of mines in the neighbourhood, who had become proprietor of a sett of a mining district in the parish of Madron, which it was said had been worked by former companies, and on which much money had been formerly expended. Mr. PERMEWAN having obtained the sett from the lords, afterwards acquired by purchase every thing that was on the ground. Ding Dong was a very ancient name of a mine in Cornwall, probably one of the most ancient in England, and was a favourite one, there accordingly sprung up in the neighbourhood several adventures, termed the East, West, and North Ding Dong Mines. A lease having been obtained by Mr. PERMEWAN, he divided the mine into 1024 shares, a prospectus was printed, and a map or plan drawn up, which it was alleged had been given to the defendant before he became, or consented to become, a shareholder. A Mr. RICHARDS had become interested in the mine, and it was reported that he held most of the shares, with the view of making transfers of them. It was also alleged that the plaintiff had applied for 100 shares, a transfer of which was effected to him on the 26th of March, 1853. This transfer the defendant retained until the 22d of April following, when, in reply to a letter from Mr. PERMEWAN, who became pursuer, and was anxious to insert Mr. BYRON'S name as an adventurer, the latter acknowledged his acceptance of the shares, subject to certain regulations, and sent down the transfer. On receipt of it, Mr. PERMEWAN sent up the usual certificate that the defendant was the owner of the shares which had been duly transferred to him, and received from the defendant an acknowledgment in reply. Mr. PERMEWAN then called on the defendant to pay 1*l.* on each of his shares, according to the conditions on which the mine had been started; it being declared in the prospectus that there was to be a call, divided into two parts, 500*l.* to go towards working the mine, and 521*l.* to Mr. PERMEWAN, to meet his advances. It had been, however, found that the 500*l.*, with a quantity of tin ore raised—for the mine was represented as not being one of those deceptive concerns—would be sufficient. When the claim was made, the defendant repudiated altogether, and it was now insisted that he was bound thereupon to have re-transferred the shares. Mr. PERMEWAN alleged that he called for a re-transfer to RICHARDS, stating that the defendant's liability would then cease, but that the defendant, although the transfer to him had been complete, refused to transfer his shares, or give up his claim on the mine; that, in fact, he sought to get rid of the liability, while he held the property. By the course pursued, if the mine turned out valuable, Mr. BYRON could resume; and it was insisted that a pursuer could not accept so irregular a repudiation. The custom is, after a transfer is accepted, to consider the transferee a shareholder in the mine, and the only way of getting rid of responsibility is to attend a mine meeting, and sign off the shares, when, of course, what is due on them must be paid. It was, therefore, contended, on the part of the plaintiff, that as the defendant had not as yet legally transferred, he continued a shareholder, and was liable to the debts of the adventure.

In support of these, Mr. PERMEYAN was examined, and no question being raised as to the delivery of the goods, he stated that he had shown Mr. BYRON either the original or a copy of the prospectus, and given him in London either a plan or a copy. On his cross-examination, he said that RICHARDS held 800 shares, and RICHARD MITCHELL, of Marazion, 300. There was a meeting on the mine on the 23d June last; notice was sent to the adventurers, of whom there were two in the county besides himself. One of them was ill at the time, and the other from home, so he held the meeting alone, representing the other adventurers. He himself proposed, seconded, and carried unanimously, the following resolution:—"Resolved, that a call of 10s. per share be made." He also moved, seconded, and carried unanimously, the following resolutions:—"Resolved, that the pursuer place in the solicitor's hands, without delay, all persons in arrears of calls." "It being represented to the pursuer that Mr. BYRON is likely to give the company some trouble, Resolved that the matter be placed in the hands of our solicitor." The Judge here asked—"Who drank the gallon of brandy which is amongst the items of Mr. BALL's account?" Mr. PASCOE, defendant's counsel—"The pursuer, no doubt, as the representative of other parties, and then proposed the last, 'Our Noble Selves.'" (Laughter.) Mr. PERMEYAN declined to produce his ledger, stating that it had been surreptitiously carried away by his clerk.

On the part of the defendant, it was insisted that PERMEWAN, when he went to London, for the purpose of getting adventurers, had agreed to let him have the lot of 100 shares in the mine, then in its infancy, for 35*l*.—the conditions being that PERMEWAN should give the names of the other proprietors, show the way in which the mine was to be managed, and the manner in which the money was to be expended. On this undertaking Mr. BYRON agreed to take the shares; the transfer was accordingly sent up, but no account had been ever furnished. When shortly afterwards the certificate of the transfer was sent up, to the defendant's great surprise it was accompanied by a demand for 100*l*., which sum PERMEWAN alleged to be then due upon the shares. Mr. BYRON, who had never been treated as an adventurer, and had never received a notice of accounts, at once sent back the certificate, indignantly repudiating the whole transaction, and stating that PERMEWAN had been guilty of a gross fraud. In June last he received a further notice, in which a demand was made for 150*l*., which he at once returned to PERMEWAN, who now brought this paltry and pitiful action through a person who never knew nor had seen Mr. BYRON, but by whose means he sought to fix responsibility on Mr. BYRON. The case of NORTHY and WEEKE & JOHNSON, tried at the Exeter Assizes in March, 1853, was relied on; as in many respects similar to the present. A Mr. DYMOND, owner or pursuer of West Crowndale Mine, had sold shares to JOHNSON. There was no evidence whether the transfer was written or not, but JOHNSON verbally relinquished, and after this relinquishment it was held by Lord CAMPBELL that he was not liable.

Mr. BYRON was examined—he had agreed to take 100 shares, or rather a tenth of the mine. Upon his asking PERMEWAN about the first cost, he was given distinctly to understand that it would be from 30% to 35%, and on these conditions he accepted them. PERMEWAN took out of his pocket a slip of paper, which he said was a list of the shareholders. Mr. E. MICHELL, of Marazion, was the first: against his name were 300 shares; and he has since declared that he never held more than 50, and he was entered for that number in the cost-book. Mr. BYRON had never seen a plan of the mine until to-day, and he never saw the prospectus until Mr. PERCIVAL CLAY kindly lent him one a short time since. He had been shamefully deceived by PERMEWAN with regard to the money he was to

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

MINING IN IRELAND.—Arrangements are nearly perfected, whereby a series of papers will appear in our Journal, on the mineral resources as well as the geological features of Ireland, aided by several exhibitions of minerals and research. As it is intended to render the series of value and importance in illustrating the deposits of mineral wealth with which the country abounds, any letters or information relating on the subject are requested to be forwarded to the Editor, and which will be duly acknowledged.

GOAT IN LONGWALL, GLASGOW.—SIR: It is a very important matter for those acquainted with coal working in Longwall to be understood that any partial vacancy (or "spoil," if you will), formed by this mode of working, is perfectly harmless, and free of any dangerous accumulation. It is, in fact, an actual saving, and one should have a wish to see this practice extended to all coal mines, as it is not only costless, but, by an inspection of any of the hundred and one pits being worked by this famous method in the neighbourhood of Glasgow.—A NEWCASTLE SCOTCHMAN: *Edinburgh, Sept. 26.*

Ans.—Will any of **your** correspondents inform us whether lead has yet been found in its elementary form, uncombined with sulphur, or any other matter; and if so, where, it has been so discovered, and whether in any quantity?—**PURVISER**, Sept. 28.

REMARK MINING COMPANY.—**SIR**: Will nothing that your Dublin correspondent can induce the directors of this company to break their disguised silence? In the absence of explanation, what can we think, but that their affairs are in a bad state. It appears to me that they should come forward with a statement of their position, and how they intend to deal under the circumstances in which they are placed.—**A SHAREHOLDER**: Dublin, Sept. 28.

"An Old Miner."—I answer to our correspondent's enquiry, we can inform him that the number of British mines in our List did not much exceed 100, and foreign about 18, in the year 1814; just 10 years since. At present, the number of British exceeds 500, a large proportion of which must be considered very questionable as to profitable returns, and foreign about 40.

MR. GURDALL'S TRIMONIAL.—SIR: I was present at the last meeting of the Peel Silver Land and Mining Company, and heard the chairman, Count Strotański, in his opening speech, speak in the highest praise of this gentleman's success, in putting a stop to the artful dodges of a knot of adventurers. The worthy count facetiously denominated him as the "arch imposer." I hope the latter will now take the English mine in hand, as I can assure him the system pursued in more than half of them is about on a par with that practiced in the worst of the gold mining companies.—PALMER QUI MERUIT PERAT: *Dorquay, Sep. 23.*

THE ROYAL HIBERNIAN MINING COMPANY.—SIR, In the "Instructive Story of a Mining Company," published in your last Journal, why do you suppress the names of the company, or the actors? Really, *Ms. Editor*, the case fits so many, that unless I speak out every poor scrip-holder will be imagining that his company is the one so piquantly referred to by you. I believe it to be the Royal Hibernian. One is almost dumb with astonishment at the barefaced impudence of the whole affair.

—J. GUERLAIN: *King's Arms-ward, April 28.*

THE POLYMORE MINE.—It is reported that the gentlemen who were to inspect the Polymore Mine, and ascertain beyond all doubt its prospects for copper, have sent their report to the directors. Will you allow me to ask, through your Journal, why it is not published? If the report is in favour of the mine proving rich for copper, the more reason is there for its being known, but there is no reason why the directors alone should be cognizant of the report.—A SHAREHOLDER : *Sept. 29.*

One who holds a So " (License). It would be out of our usual course, and, indeed, impossible to answer all the enquiries of our correspondent. We may, however, safely state, as a general proposition, that the right to obtain minerals, whether founded on the ownership of them, or on a grant, reservation, custom, or prescription, comprises the right to do all that is necessary towards the convenient working of them, reasonable care being taken to avoid injury to the property and rights of others. In several cases have settled the application of this rule to certain circumstances, and through the applicability of it to others of probable occurrence. Consult a solicitor competent with these matters.

GREAT CRIMINAL MINE.—As "An Enemy to Deception" appears to be well informed upon the working of this mine, if he can substantiate all he states in his communication, we would recommend him to call a meeting of shareholders. The report we gave was a faithful account of the proceedings.

QUARTZ CRUSHING MACHINERY.—[Sir: Your correspondent, Mr. M'Arthur, need not go to the expense of putting up barrel amalgamation for his gold mines. Barrel amalgamation is the system adopted for silver ores, and not for gold. In the Marquette at least 52 oz. of gold is extracted from 1 ton of pyrites, at about 8s. 10d. per ton; whereas the cost attending the treatment by barrel amalgamation is 8d. 16s.]

—EVAN HOPKINS: *London Mail, November, Nov. 28.*

NEDWIN AND HALL'S PORTABLE ENGINE.—"M. C."—We will endeavour to obtain the particulars required, and publish them in next week's *Mining Journal*.

CARRERY WEST MINING COMPANY.—"One in the Dark."—The mine is said to be out of debt, and the balance at bankers, on the last inst., was 147*l.* 10*s.*, which is the only available capital for working the mines. Although scrip certificates have been issued, the directors who have signed the cost-book refuse to take the responsibility upon themselves, and if a sufficient number of seripholders should not sign on or before Tuesday next, it is expected that the company will be wound-up.

POLTNORE MINE.—“One not Interested” complains that Mr. N. Ennor ought to say at what period he visited the mine, in justice to the agents or the manager, who has lately resigned. Our correspondent states that the mine is carried on underground in a manner that will do justice to any agents, and that they have a course of ore in the bottom of the 30 west, worth 100*l.* per fm.

NATIONAL BRAZILIAN MINING ASSOCIATION.—In addition to the communications of "A Shareholder," in the *Mining Journal* of the 16th, and "Argus," in that of the 23d inst., we are continually receiving enquiries and *ex parte* statements, the insertion of which would render little or no real information. We now have further enquiry from "A Shareholder," who is anxious to learn the cause of the present position of the shareholders, while at least 300,000,000, must have been invested in the undertaking. "V. W." has also addressed us on the depressed value in the market for the shares, which, however, may be accounted for, in consequence of the arrangements proposed at the last meeting (a report of which will be found in our *Journal* of the 27th May) not yet being carried out; and until some definite measures are adopted, buyers cannot be expected but on speculation. Of the gross value of the property, and its vast capabilities in an agricultural as well as an aridiferous point of view, there appears to be but one opinion; and we recommend our correspondents to peruse some remarks the leading articles of the *Mining Journal* of the 3d and 17th Jan. We will also endeavour in our next Number to lay before our readers some further particulars, with present position and progress making.

"Miner" (Lelant) will find the matter more fully referred to in this day's Journal. We are obliged for his attention, and shall be glad to hear from him, after reading the remarks alluded to.

STEWART.—We shall be glad of further communications from our Dorking correspondent, developing the result of his experience; but the omitted letter treats on a subject which must, so far as we are concerned, remain for the present in abeyance: all that he states is now becoming pretty generally known, and, consequently, can not long be kept from public comment.

BRITANNIA MINE.—“A Looker-on, who knows how things ought to be done.”—We have devoted such a large space to a report of the proceedings at the meeting held on Thursday, that the insertion of our correspondent's letter becomes unnecessary. As the company start altogether on a new plan, he will, no doubt, watch narrowly their future proceedings.

FOOTLOCKER MINE. — So I am sorry that the agents should have died when Mr. Ennor visited the mine, which, as he says, caused him a ride after them, etc. Mr. Ennor states that he was induced to notice my comments from one remark, which was as to his not examining the mine underground. I did not state that Mr. Ennor was to examine the mine, but was anxious to know at what period he did so, and whether or not his first trip would be sufficient to give him a full knowledge of the mine. The information was formed from a personal underground inspection of the levels. To the latter question, Mr. Ennor has replied; and as I have been informed by the late captain, who undertook the management in March, 1853, that Mr. Ennor had not been on the mine since that date, perhaps Mr. Ennor will be pleased, in your next week's Journal, to inform the readers at what precise period he visited the mine. — Ours
INTERESTED: Sept. 27.

CRADDOCK'S STEAM-ENGINES.—SIR: Noticing, some months since, an account in your Journal of the working of a steam-engine by Mr. T. Craddock on a new principle, which had been then very recently put up on the Haytor Consols Mine, can any of your readers furnish me with the results of a more extended working—as to its power, its economy, and if it has proved itself, as was then confidently anticipated, equal to the Cornish engines?—*INQUIRER: Sept. 25.*

"W. C." (Potteries).—The colouring matters used by the Chinese in their porcelain manufactures are—for the greens and bluish green, oxide of copper; for reds, gold; oxide of cobalt for blues; oxide of antimony for yellows; arsenic acid for white.

LANE E. GIBSON.—SIR: In your Journal of the 23d inst., referring to a case of Plant E. Gibson, wherein you state the plaintiff came from Briery Hill to attend the judge allow me to correct you, for that gentleman was in company with myself and others on a piscatorial excursion, when a telegraphic message from the man of law spelt the finest sport we have had this season.—ISAAC WALTON: *Cheltenham, Sept. 26.*

MR. HENRY GIBSON, AND HIS DETRACTORS.—SIR: I perceive by your Notices to Correspondents, that you have received anonymous letters respecting myself; several provincial editors have also received the same; in some instances they assisted in lighting their office fires, or were consigned to the waste-paper basket; but in others they have been handed over to me, and are now in the safe keeping of my solicitor; but, as I am aware from whence they have emanated, steps will be taken in November.

ner to punish those who, assassin-like, will attempt to stab a man in the back—for you are aware that any one who will write an anonymous letter would be guilty of the same, or pick a pocket. I shall, like Lieut. Perry, on my return, appeal to a jury my country; also to our great organ of the press, the *Times*, after sending them the full text of the letter, and asking them to publish it, and to say whether they judge if I am right or wrong, in putting down a set of scoundrels, who would start companies for the purpose of enriching themselves, to the cost of their friends, or the ruin of the ignorant, the widow, and the orphan; but, as in the days of ancient Joseph, we there find him the envy of his own brethren, who would have slain him through jealousy—no wonder the seeds sown thus should bear fruit, and I should stand forth a benefactor to my country. I shall, therefore, appeal to the people of the north; not: I will appeal to all in my employ—or ever were—in Ireland, Cornwall, Devon, and now in Wales, or who ever knew me, if any one of them can say I have ever done that which any man need care to blush for? I shall read content; the day is now fast approaching when punishment will fall heavily on those that deserve it. I shall now draw the curtain, and expose those miscreants as they deserve.—Hear ye, ye first!

F.S.—I know well that respectable attorneys in the country have refused to do a certain class of business for their clients, and, in case of need, tell them "to go to London," where, I regret to say, there are to be found disreputable men, who will take up any dirty case, and are connected with those who act as their harpies in picking up stray clients, sharing the profits, and getting their own law at a very cheap rate.—H. G.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, in preference to postage-stamps.

diameter, with double furnaces, mixing chambers, and about 110 to 120 three-inch tubes, which is the best and most approved plan. In boilers thus constructed, the emission of great volumes of smoke may be greatly mitigated, if not entirely prevented, and they are calculated, from the large absorbing surfaces which they present, to be excellent generators of steam. They require no brick flues; one boiler of this description will raise as much, if not more, steam than the four put together at present at work in the concern in question; and two boilers of this description would effect a still greater saving by adopting the system of slow combustion, as used in Cornwall. To abate the nuisance of smoke, and to render the working of engines effectual, it is essential to use every means of preventing the escape of heat; that the recipient surface of the boiler should absorb the whole heat as it passes from the furnace to the chimney; that the boiler should be carefully covered with felt, to prevent the radiation of heat; that the water for feeding should be raised to the boiling point before it enters the boiler, which may be done by enlarging the surface of the conducting pipes and surrounding them by the heated currents as they pass from the boiler to the chimney; and, finally, that the steam pipes, cylinder, and the parts communicating with the boiler and condenser, should be carefully clothed in the same way as the boiler itself, and every care taken to retain the heat, and prevent its escape. These follow rules required to be observed in the management of the furnace, which are well worthy of special attention.

1. Enginemen and stokers will be required to be instructed to charge their fires always in front, and before throwing on to the furnace, the incandescent, or partially burnt fuel must be pushed backward in the direction of the bridge, in order effectually to cover the grate bars, and prevent the admission of a surcharge of cold air between them.
2. The furnace or grate bars to be kept clean and free from clinkers, and that for the purpose of admitting as much air as may be necessary to combine with the gases as they pass from the newly-charged coal over the charred, or bright part of the furnace.
3. The draught of the furnace to be regulated by the damper, which in slow combustion is raised only a few inches, in order to retain the heat as long as possible in the flues and round the boiler.
4. In every case where it can be accomplished, the boiler, steam-pipes, and every part exposed to the atmosphere, should be carefully clothed and covered with non-conducting material, to prevent the escape of heat.
5. In situations where space for the required amount of boiler-power cannot be obtained, the system of the diffusion of air behind the bridge, if properly attended to, may be fairly adopted.

Lastly, Having ascertained by experiment the quantity of coal necessary to perform a given quantity of work, we should recommend that the engineer, or those responsible for the working of the boilers, should have a premium on the quantity of coal saved, and that a proportionate fine should be imposed for neglect, or the appearance of smoke.

W. FAIRBAIRN; J. LESLIE; & J. JOHNSON.

These are accompanied by an appendix, in which are contained some interesting and instructive details. When the steam-engine was first constructed, 3 to 3½ lbs. pressure upon the square inch was all that could be ventured on, progressively it got up to 7, 8, and 10 lbs., and now the best and most economical are worked at 30 lbs. on the square inch. In locomotive and non-condensing engines, steam is worked with perfect safety at a pressure varying from 50 to 150 lbs. The system of slow combustion is carried on in Cornwall with success as regards the emission of smoke, and it is no uncommon occurrence to witness a dozen chimneys, of great power and dimensions, carefully whitewashed, with the atmosphere above them as clear and transparent as if the fires below did not exist. The fire in Cornwall is often never disturbed for several consecutive hours, and on looking into the furnace there is a low, smouldering fire, which consumes every particle of coal, and maintains the full pressure of steam up to 30 and 40 lbs. on the square inch. When we witness the repulsive, dark atmosphere which hovers over the seats of our manufactures, we should remember that the whole secret of economy in combustion and the absence of smoke is, plenty of boiler space, and proper arrangements to prevent the escape of heat. The report concludes by stating that the three gentlemen selected had endeavoured to lay before the authorities such information as appeared to them calculated to abate the nuisance of smoke, and purify the black, dense atmosphere which hangs over the city of Glasgow. That those dark and gloomy vapours can be prevented from ascending they entertained no doubts; and after the observations which they considered it their duty to make, and which applied with equal force to other manufacturing towns, it rested with the public authorities of the city to enforce, mitigate, or improve, their practical recommendations.

The first annual meeting of the GREAT CAMBRIAN MINING AND QUARRYING COMPANY was held on Wednesday; and the unanimous manner in which the proceedings were conducted is calculated to prove very satisfactory to the shareholders. It was truly observed that there were two methods of conducting mining adventures—one carried on with a view of rigging the market, and getting up the shares to a premium; and the other, the sole object of legitimately working the mine, and repaying the shareholders in the shape of dividends. We think it may be safely affirmed, that the Great Cambrian Mining Company belong to the latter class; and the manner in which it is conducted is worthy of imitation by any company having the same object in view. The gold question in England having excited so much attention lately, and caused so much disappointment, a question was asked whether they intended to erect machinery for obtaining gold? The directors replied that, although they had had several samples operated upon by gold-machines, they were determined not to lay out 1s. in the purchase of such machinery—one of those gentlemen observing that they had plenty of lead and copper; and if they were mad enough to look after the gold, they would be dropping the substance to grasp at the shadow. This announcement was received with loud applause by all present—some of whom admitted they had paid dearly for their experience in seeking for gold in England. The mines of the Great Cambrian Company have natural advantages, possessed by few in the kingdom—the property being bounded by a navigable river, and the crushing and dressing machinery being within a few yards of the port where the ore can be shipped. They have also an unlimited supply of water power throughout the year; and from the great activity displayed by the board of directors and secretary in effectually developing the mines, it is to be hoped they will be rewarded with the success they so richly deserve. The machinery being now complete, and of the best description, it was announced that the capital would be limited to 20,000l., instead of 30,000l., as originally proposed; and that at the next meeting, to be held in two months, a dividend at the rate of 10 per cent. would be declared out of the profit from the sale of ore, and that from the immense quantity at surface they would then be enabled to pay regular dividends. As this adventure hitherto appears to have been conducted in the most honourable manner, and as the next meeting must be looked forward to with great interest, we trust the directors will continue the same course of legitimate mining, and that whatever amount of dividend be declared, it will be strictly out of the profits, and not out of the capital.

The LINARES MINING COMPANY held their usual half-yearly meeting on Wednesday; and on the day following, as will be seen by reports in another column, the shareholders in the NEW LINARES COMPANY assembled at the London Tavern, to hear from the directors a statement of their finances, and the progress made in the development of their mines. At the former meeting, as was, no doubt, anticipated, some disappointment was expressed at the suspension of the payment of a dividend; but, looking at the expenditure in the erection of new smelting houses, and other commodious buildings—at the difficulties which have been experienced in the shipment of ore—the sickness which has prevailed amongst the mining staff, and the consequent increase in the rate of wages, in order to secure efficient workmen—the shareholders, we think, will see no reason to be dissatisfied with their position. It was the opinion of some of those present, that the course recommended by the directors was calculated to depreciate the value of the shares. Possibly it is, but such depression will be only temporary, and will not affect those who have invested their money in the undertaking for a legitimate purpose. On the contrary, we are rather inclined to believe that the directors have taken a wise and prudent course, to strengthen and secure the object which they, in common with the general body of shareholders, have in view—namely, the certainty of more profitable returns. With regard to a reserve fund of 10,000l., there exists, and always will exist, a difference of opinion. It should, however, be borne in mind, that no undertaking upon a scale of magnitude can command a corresponding success, unless its financial position is well fortified; and although, as Mr. JOHN TAYLOR observed, it is not necessary to secure so large a sum as that mentioned immediately, we are inclined to think that the proprietors will see the policy of arming the directors with ample funds to meet contingencies. There is no property so liable to fluctuation as mining property—circumstances will vary, and it is not easy, or even possible at times, either to foresee or control them. To those so well experienced, and possessing such profound knowledge of their profession, as Mr. TAYLOR, this fact is patent; and we are not, therefore, surprised at his anxiety to meet the pressure of circumstances,

should that period ever arrive, but which, seeing the almost marvellous prospects of success which the undertaking has before it, we believe to be at an incalculable distance.

With regard to the NEW LINARES COMPANY, it affords us much satisfaction to find that there are amongst the shareholders gentlemen of the highest respectability, and that they are ready to lend every assistance in their power in carrying out the legitimate objects of the promoters. Nor can we pass over, without a word of commendation, the extraordinary exertions which have been made in the rapid development of these mines, and the economy which has been exercised both at home and abroad. All this, we repeat, it is most satisfactory to observe, calculated as it is to strengthen the stability, and promote the success of the undertaking; and thus secure the approval of those who have a pecuniary interest in its success, as well as afford encouragement and extend considerable advantages to the legitimate school of mining adventure. We do not entertain a doubt of the ultimate success of this company.

"THE ROYAL BOUNTY.—Her Majesty has been pleased to make a grant of 1000l. to Mrs. Taylor, the widow of Mr. James Taylor, the discoverer of steam navigation."

The good Queen who stands at the head of this vast empire is not more universally than deservedly esteemed for her many unassuming virtues, and her truly English character. It is not of her we would speak, though her name is coupled with the extract above quoted; it is of her advisers. We ask, is it not an insult to the intelligence of the age, that while warriors, and statesmen, and placemen, are loaded with honours and emoluments, and made, in a degree, the special objects of a sort of hero-worship, that the widow of the great discoverer of steam navigation should stand in need of 1000l., and that having by Royal bounty received it, the great gift should be pompously paraded in the public newspapers? You—that is, the nation—have dispatched a mighty armament to the Crimea, and day after day you hope to hear of the destruction of Russian power and Russian tyranny in the Black Sea. By what force, by what power, do you transport those magnificent ships, with their splendid equipments and tremendous artillery, to the scene of action? By what but by the power of steam?

Whole millions are not begrudged in the conduct of this war. Blood and treasure are of no account when measured with the necessity of a successful issue. Empires may almost be said to be trembling in the balance; and to the man who turns the scale—who places you, in a manner, independent of the elements—who enables you to transport your army and material wherever you may list—you, or rather those ministers who are supposed to represent you, open the public purse-strings, and accord the liberal donation of 1000l., as a well-merited present from thirty millions of people! Is not this a crying shame? Is it not almost enough to make even the shade of WAGHORN himself rise up in rebuke? The Government of the day, and its fungoid family, constitute a select few. They have, indeed, occasionally great condensation; for that costs nothing. They have no liberality, except to their immediate friends; for selfishness is the leading feature of their policy. And as for the general cultivation of art and science, one of the great *had-beens* was felicitously termed by the *Times* newspaper, the other day, "the representative of the ignorance of the age." It is this spirit of exclusiveness, illiberality, and nepotism, which saps the foundations of hope, opposes impenetrable rocks to the pioneers of progress, and causes many a gifted but uninfluential man to die with a grand and useful secret in his breast.

In perusing these remarks, let it be understood that we speak of Mr. TAYLOR as being the inventor of steam navigation, because he is so recognised in this present instance. The real origin of the invention has proved the fertile theme of protracted controversy. Our present object is to point to the paltry character of the reward which the Government of this country generally confers upon men who, moving in the civil ranks of life, succeed in the realisation of some great achievement affecting, perhaps, the interest of the entire nation, or, as in the present instance, the progress, the well-being, and the enlightenment of the whole human race.

It is quite needless in this country to allude to the vast importance of COAL; nevertheless, the extraordinary and daily augmenting increase in its production and consumption is matter for the student to learn, for the economist to calculate, and upon which the commercial mind can ponder and speculate. We have the high authority of Mr. HERBERT MACKWORTH, in the lecture lately delivered by him at the Society of Arts, that the probable quantity to be raised in Great Britain during the present year, applicable to home and foreign consumption, is estimated at about 54,500,000 tons. The vastness of this quantity may, in the eyes of some, appear to border on the marvellous; but we must remember that our population is more than three times as great as it was a century past, and that our requirements for coal for steam, in all its multiplied forms, irrespective of foreign exportation, and supplies for purely domestic purposes, have increased in a far greater proportion. Our Journal publishes regularly every month the quantities of coal brought into London as well by sea as by railway and canal, and referring to that for the month of August, we find that for the eight months of the present year, ending on the 1st August last, the number of ships that entered the port of London with cargoes of coal was 8007, compared with 7956 in the year 1853, the quantity brought by ship within that period being 2,246,320 tons; while that brought in the same period of last year was 2,204,928 tons, being an increase of 41,392 tons in the present year. The comparative increase in the coal trade by railway is even more striking, the quantity in the first eight months of this year being 585,877 tons 2 cwt., contrasted with 388,673 tons 2 cwt. for the same period of last year, being an increase of 197,203 tons 19 cwt. There has been also an increase in the limited quantity brought by canal, the quantity up to the 31st August, 1854, being 20,441 tons 19 cwt.; while that during the same period of the last year was only 12,708 tons 13 cwt., being an increase of this year of 7733 tons 6 cwt. in the coals brought by canal. The gross comparative increase in the eight months of this year by the three modes of transit over the first eight months of last year amounts to 217,645 tons 18 cwt. We have thus an increased supply regularly keeping pace with the probable increase of population in this vast metropolis, the supply and demand regulating each other almost with as much accuracy as if they were estimated by a graduated scale.

While the vast series of carbonaceous deposits now extensively developed in the northern and midland districts of England minister to our domestic comforts, by furnishing an abundance of healthy, wholesome, and cheerful fuel, of such a quality as is denied to almost every other European state, to her coal mines is England indebted to the advance of civilisation which she exhibits, and to the pre-eminence which she sustains. Even in the recent embarkation of the allied troops for the Crimea, the splendid fleet of steam transports which she exhibited in such vessels as the *Himalayas*, *Orinoco*, &c., while exciting the admiration of our gallant allies, the French, drew from them an acknowledgment that they were beyond competition on their part—a superiority clearly traceable to the quantity and quality of our coal. Without the coal which we possess, the powers of steam would probably never have been enquired after, and, even if speculatively discovered, would have been in practice comparatively valueless and necessarily unemployed. To coal can we clearly trace the conception and formation of railways; for if the coal did not exist, the iron that employs our population, that covers our country with modes of transit, exceeding in rapidity, certainty, and capacity the speculations of philosophers, or the dreams of poets, would remain buried and unprofitable in the earth. The combination of coal and iron in these islands, while furnishing materials for the theories of the geologist, for the calculations of the statistic, and for the contemplation of the learned, must appear, even in the eyes of the vulgar, as the most bounteous endowment which Providence has ever conferred upon any country. Within a small area, which would be passed over unnoticed in many parts of Europe, are found busy and prosperous towns, vast manufactories, and unparalleled industry, all attracted to, and centering in, the spots where the combinations of coal and iron occur. We can trace in distant lands and in remote regions the influences which the productions of those localities, so favoured by nature, produce upon the habits, comforts, condition, and happiness of man.

While the coal and iron of England are daily elevating her position and exalting her ascendancy, we see in America, in Belgium, in France, and Germany, the population following the example of this country, and gradually settling in the districts where iron and coal are supposed to exist. Mankind has arrived at the conviction that competition is idle, that manufacturing importance cannot be attained except by their union, and any great advance has been hitherto found impracticable, except in countries and in districts where Providence has pre-ordained their existence. This country has nothing to apprehend from the extension of wealth in others; more extended cultivation will only tend to open fresh markets, and sti-

mulate the energies with which we are invested by the combined advantages of superior industry, capital, and skill. The vast lines of railways now in progress in the French empire must long give ample employment to the furnaces and foundries of England, and even their completion will only induce other countries to follow their example. So long as the coal and iron of England last—and we may calculate on known supplies for centuries to come—England will fearlessly maintain her position amongst nations; and while promoting, by their increased development and production, the interests of her own people, advance the civilisation of the world.

We must not, however, rest too confidently in the certainty of unlimited abundance; it is well known that, while fresh coal fields and mines of iron are being opened in some districts, the ironstone, and perhaps the coal, at least, is getting scarce in others. We happily possess what our ancestors did not—science to guide us in the discovery of fresh mineral resources, to meet any deficiency which may be occasioned by our vast consumption. We cannot conclude our observations upon a subject of interest and importance to us, all better than by adopting the eloquent and impressive language of the Earl of HANOWAY, in his inaugural address at the opening of the present meeting of the British Association at Liverpool. The President, referring to geology, observed—"I have nothing to report save that the increasing scarcity of ironstone and coal is driving practical men to have greater respect for a science which enables them to form a very sound conjecture where such minerals are likely to be found, and to come to something like an actual certainty as to where they are not. When the questions begin to be asked—'Is there a square mile in all the coal fields of Britain unoccupied by the mines?'—'Of its 5000 square miles of visible coal tract, how much remains untouched?'—it is time, indeed, to listen to that science which has taught us, so successfully, in the hands of a MURCHISON, a PHILLIPS, and others, where further resources for the supply of this, the life of Britain, are to be found."

THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN BIRMINGHAM.]

SEPT. 28.—The event of the week, in connection with the staple trade of the district, has been the preliminary meeting of the ironmasters, which took place to-day at the Union Inn, Union-street, in this town. The principal masters assembled at one o'clock, and after a brief consultation, it was unanimously resolved that there should not be any reduction on the prices of the past quarter. This resolution was, however, more the result of hope for the future than an extraordinary demand like that which existed at the commencement of the Midsummer quarter. Then there were more orders on the books than could be executed, but such is not the case now. Orders are comparatively few, and many are of opinion that if there is not a decided change before long it will be difficult to maintain existing rates. A few days, however, as I remarked in my last, may make a vast difference in the tone of the buyers. All is still suspense relative to the expedition to the Crimea, and it is impossible to separate the present inactivity, not only in the iron trade, but in all other branches of trade in this and the adjoining counties, from the affairs of the East. The banks are doubly cautious; money is decidedly scarce, and difficult to be had on such terms as will enable the manufacturers to produce with profit, and the uncertainty of the war renders consignments so doubtful, unless for prompt payment, that very few are disposed to speculate. Orders to the amount of many thousands of pounds are now in abeyance, waiting the arrival of news from the seat of war, and which will, no doubt, be issued on receipt of favourable intelligence. Within the last fortnight the price of pig-iron has gone down 10s. per ton, and it is now selling at 57. 10s., being half the price of bar-iron. The demand for bars has fallen off very considerably, but hopes are in requisition, and realising firm prices. Plates are also much easier obtained, owing to a falling off in shipbuilding, which would seem to have been carried on rather in excess, if we may judge from the number of failures which have recently taken place in that important branch of industry, and with which the interest of the iron trade is so intimately connected.

Building operations in Lancashire and Yorkshire are also reported to have received a check, and to this cause may also be attributed the prevailing dullness in the chief trade of this locality. The war, however, is the primary cause of all, and with a favourable turn to it we may with certainty expect a prompt return of those brisk orders, which heretofore taxed all our powers of production.

The Out-Nail Trade is remarkably dull; the largest houses are nearly without orders, or with so very few as to render it difficult for them to keep their hands employed.

In the Coal Trade, there is now no difficulty in procuring a supply for the works at from 9s. to 10s. per ton. Good home coal still realises high prices—say, from 17s. to 18s. per ton, and there is no scarcity.

The Copper and Tin Trades are firm. The market here is well supplied with both, but the demand throughout the week has not amounted to the average consumption.

For General Hardware, the orders received here during the week have been few, and evidently regulated in quantity, with a view to altered lists, although there cannot be any material alteration so long as the raw material maintains its price.

The Jewellery Trade is improving, and some of the large makers, who three months ago found it difficult to retain their hands, are now in receipt of some brisk orders.

Of the Steel Pen Trade there are more favourable reports this week. Some large continental orders have arrived, the execution of which will extend over some weeks.

The American Trade is dull, comparatively few orders having been received by the last arrival.

In connection with the public companies, I may notice a meeting of the Rheidal Mining Company, which was held here on Saturday last. The report from Mr. Wm. Spooner, after detailing the operations at the mine, concludes by observing that, "As to probable expenses, I hope that with this month a great part of our labour charge (except mining) will cease, and we shall know the limit of the cost of machinery and materials, I am sure, as compared with other mines, they have not been heavy in our company, and can vouch that there has been no waste in what has been furnished. I still confidently hope that we have a good and lasting property in the Rheidal Mine, and only regret that shareholders should have been led in any way to expect more rapid returns and a smaller expense than are possible to have in a mine of the considerable magnitude of the Rheidal Mine. The accounts show a balance in favour of the company of 2074. 5s. 10d., after paying costs up to the 5th August."

IRON AND COAL TRADES OF YORKSHIRE AND DERBYSHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

SEPT. 29.—The preliminary meeting of the ironmasters in Staffordshire, to be held this week, is looked forward to with considerable interest, as, although the leading houses are enabled, by the quality of their manufacture, to maintain present prices, which, in fact, are not more than remunerative, when the high price of pigs is taken into account, there are very inferior qualities of bars in the market, at lower prices than the quotations of last quarter-day, and this gives a feeling of distrust to buyers, who will, we doubt not, be reassured, when the decision of the ironmasters is known; as there is no doubt, we think, of their adhering to present prices. The prosperity of the country, the satisfactory state of our manufactures generally, the high price of labour and coal, and the scarcity of ironstone, must all contribute to the maintenance of existing prices; and as all merchants have bought only for immediate consumption for many months, and are almost destitute of stock with which to carry on their business, they must shortly come into the market. American stocks and securities are looking better, and its railways, many of which require iron only to render them productive, will, no doubt, buy largely, as a better tone of feeling pervades. The Scotch market, in the absence of speculation, is somewhat easier; although present prices, which exhibit a decline, do not indicate weakness, but are the effect of the suspension of speculative purchases.

The makers of Railway Wheels and Ironwork are all as actively engaged as at any period of the year: the increased business of the kingdom, the great extension of railways, and their growing importance as a means of transit, unaffected as they are by the vicissitudes of weather, from which canal traffic suffers so materially, renders the demand for rolling stock unusually good; and as the winter approaches, when the coal trade, already brisk, will receive additional impetus, wagons will, no doubt, be in great request.

The Hardware, Cutlery, and Edge Tool Trades of Sheffield continue

SALES OF ESTATES IN IRELAND.—In addition to a description of some valuable mineral springs in the counties of Tyrone and Antrim for sale, under the sanction of the Government, in our last Journal, we have received from Messrs. O'Brien and Stackpoole, of Dublin, descriptive particulars of several other properties in the county of Clare, worthy of especial notice. Among these is the Kilbricken Estate, situated in the Kilbricken Barony, and lying back for a term of 21 years, at the close of the year 1864. The whole comprises 10,766 acres, for which private offers will be received up to the 10th October next, for approval by the Commissioners. We shall more fully describe these estates in our next week's Journal.

WEEKLY LIST OF NEW PATENTS

to be RECEIVED, for the execution of a release to the company.
 London, Sept. 30, 1854. By order, WM NICHOLLS,

Mr. H. AYRES, at the office, 39, Lombard-street, to whom all advertisements may be forwarded.

OVERLAND ROUTE.—STEAM TO INDIA AND CHINA, &c.
THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY, HONG KONG, SINGAPORE, AND CALCUTTA, have for the MEDIAN, INDIAN, AND CHINA, by their mail steamers leaving Southampton on the 4th and 20th of every month, and for AUSTRALIA by those of the 4th of November, and 4th of every alternate month thereafter.
For further particulars, apply at the company's office, 123, Leadenhall-street, London, and Oriental-place, Southampton.

LIVERPOOL CORPORATION LANDING STAGE.—TO CONTRACTORS, SHIPBUILDERS (WOOD AND IRON), IRONFOUNDERS, BOILER-MAKERS, &c. THE CORPORATION OF LIVERPOOL are prepared to receive TENDERS from parties willing to undertake to CONSTRUCT, FIX IN PLACE, AND COMPLETE ready for public use, a NEW FLOATING LANDING STAGE, to be moored in the River Mersey, in front of and parallel to the Prince's Dock Pier, Quayside.

The contract will comprise 33 floating positions of the very best boiler work, in length varying from 50 to 100 ft., and width 120 ft. or thereabouts; 5 wrought-iron keelsons or hollow rectangular beams, each 100 ft. long, from 4 to 5 ft. in depth, 2 ft. in thickness, the gross weight of which will be about 1200 tons; 8 other hollow beams of wrought-iron, forming the girders of four bridges connecting the stage with the shore, and weighing about 200 tons; 60 tons, more or less, of cast-iron; and about 170 tons of smith's work, in knees, straps, bolts, spikes, mooring-chains, &c.; together with about 95,000 cubic feet of timber, in deck beams, decks, &c.; wrought-iron plates, and other materials, with duplicate schedule of quantities for the parties tendering, upon, together with a detailed drawing of the stage, to be supplied to any party making application for the same at the office of the surveyor, Town Hall, Liverpool, between the hours of Ten and Four o'clock, on and after the 1st day of September next. No copies of the specification and drawings will be allowed to be made, but a payment of Ten Guineas will be required for the whole set. Sealed tenders for the above works, on the duplicate schedule of quantities which accompanies each specification, are to be delivered at the Town Hall, Liverpool, in sealed covers, addressed to the Finance Committee (and marked on the outside "Tender for Landing Stage"), on or before the 14th day of October, by Eleven o'clock A.M., after which hour on that day no tender will be received. Parties or their agents to be in attendance on that day at Two o'clock.
Each tender must contain a sealed letter, with the names of two responsible parties who are willing to become bound, jointly and severally, with the party tendering for the contract, in the sum of £20,000 for the due performance thereof. The corporation will not be bound to accept the lowest tender.
Town Hall, August 18, 1854. WILLIAM SHUTTLEWORTH, Town Clerk.

TUNNEL WORK TO BE LET.—CORNWALL RAILWAY.
TO MINERS, SUB-CONTRACTORS, &c.—TO BE LET, THE MINING WORK OF TREVENNER TUNNEL, in length 250 yards, through which a bottom heading, 500 yards in length, 8 ft. square, is already driven; for further particulars, apply to Messrs. R. SHARPE AND SONS, Lostwithiel, Cornwall.

HIGHWAYS.—CORPORATE BODIES AND CONTRACTORS are informed that HUGH JONES, of PEN-Y-BYTHOD, LLANDWROD, near CARMARVON, has ON SALE AN UNLIMITED QUANTITY OF GRANITE SETTS, of the most perfect hardness and durability. The sizes may be had to order. The prices will be forwarded on application.

COLLEGE OF INDUSTRIAL SCIENCE,
NEVILLE HALL, NEWCASTLE-ON-TYNE.
ASSAY OFFICE AND LABORATORY UNDER THE DIRECTION OF DR. THOMAS RICHARDSON AND MR. E. J. G. BLOWELL, assisted by MR. W. CROWDER.
THE LABORATORIES ARE OPEN DAILY, FROM 9 A.M. TO 5 P.M., where instruction is given in every branch of Assaying, Analytical Chemistry, and Chemical Research. Fee for Twelve Months, £32 10s.

ANALYSES AND ASSAYS OF NATURAL AND MANUFACTURING PRODUCTS, such as Ores, Soils, Waters, Gases, Metals, Coals, Artificial Manures, Alkalies, &c., are made on moderate terms, and the commercial value estimated when required. INVESTIGATIONS AND EXPERIMENTS FOR IMPROVING MANUFACTURING PROCESSES carried on in conjunction with the proprietors.
A COURSE OF ONE HUNDRED LECTURES ON GENERAL CHEMISTRY delivered during the Winter Session at the College of Medicine in connection with the University of Durham, to which the laboratory students have free admission.

PARSEY'S PATENT REVOLVING PUMPING ENGINE.
A 10-horse engine will throw 50 cubic ft., or 300 gallons of water, 350 ft. high per minute, and greater quantities and height according to the power. HAND ENGINES, to throw easily 9 gallons or more, 100 feet high. COMPACT FIRE ENGINES, of extraordinary throw and quantity, by hand or power. WATER COMPANIES may RAISE AND THROW GREATER QUANTITIES, with greater speed and much LESS STEAM POWER, than by any other means. WATER RAISED AND FOUNTAINS PLAYED WITHOUT ANY LOSS OF WATER. WATER RAISED FROM THE DEEPEST MINES, WITHOUT LIFTS. Lands drained, irrigated, liquid manure distributed, &c.—MR. PARSEY, engineer and patentee, 3, Crescent-place, Burton-crescent; or MR. FREEMAN ROSE, No. 70, Strand.

EXPERIMENT AND REDUCTION WORKS,
LETT'S WHARF, SURREY SIDE, WATERLOO BRIDGE.
NOTICE.—MR. F. A. CATTY has CEASED to be CONNECTED with the above concern. The WORKS ARE NOW IN OPERATION, for the purposes of GENERAL ASSAY OF THE PRECIOUS METALS, and all other kinds of ORES, and for the REDUCTION OF PARCELS OF ORE (in any extent). FRED. HENRY, F.R.S., undertaking the chemical and assaying, as heretofore. J. R. RAINES, Manager (pro tem.).

ORE CRUSHING.—CAUTION.—I hereby CAUTION all persons MANUFACTURING, USING, AND SENDING, without special license from me, MACHINES for the purpose of CRUSHING, PULVERIZING, AND AMALGAMATING mineral and other substances, in which BALLS or SPHERES ARE USED IN CONNECTION WITH, OR MOVED BY, A REVOLVING PLATE OR FLAT, the same having been secured to me through, and in the name of, my agent, G. J. Walls, under various modifications, by Her Majesty's Letters Patent for England and the Colonies, dated June and December, 1853. Signed, J. W. COCHRAN.

THE GOLD ORE MILL PERFECTED, BY W. L. TIZARD.
MECHANICAL AND CONSULTING ENGINEER, by which the following amongst other DEFECTS in similar machines are AVOIDED:—viz., Large outlay for superfluous machinery, excessive wear and tear, and compulsory renewal, in lieu of repairing, unportability, inefficiency, constant noise, little work, and self-destruction of clashing balls. Waste of time, materials, and motive power, by either stampers, edge runners, cones, or spheres in contact with flat or inclined surfaces, fracture of pans and balls by fire, water, and concussion; inevitable loss of mercury, amalgam, &c., which are thrown off with the tailings at the periphery by centrifugal motion; absence of security against pestilence and noxiousness. For description and prices, address Mr. W. L. Tizard, at the manufactory, 34½, Abchurch-lane, London.

TO DIRECTORS AND SECRETARIES OF MINES, AND ALL who are in any way INTERESTED IN GOLD, SILVER, COPPER, LEAD, OR TIN MINES.—STAMPS, ROLLERS, AND BUDDLES SUPPLIED BY DREW'S PATENT CRUSHING AND WASHING MACHINES. To be seen at work daily at the Windsor Ironworks, City-road.
Licenses granted to manufacturers, and machines sold or let as may be arranged. Apply to the patentee, at the works, or to Mr. Mossor, 11, Planer's Hall, Old Broad-street, London.

THE REAL VALUE OF MINING PROPERTY ASCERTAINED
BY E. D. SMITH'S GOLD AMALGAMATOR.
OFFICE, No. 41, STRAND, where a prospectus may be obtained, containing the results of experiments, opinions of the press, &c. Ore tested for companies and private parties, and a return made within one week after. For particulars, address a letter to the patentee, as above.

NOTICE TO MINING COMPANIES AND RAILWAY DIRECTORS.—THE AIR-ENGINE TELEGRAPH IS PATENTED. From all parts of a mine to and from the surface, INSTANT SIGNALS are given by means of a cylinder and piston (3 inch diameter) attached to the steam-engine whistle or powerful bell, and worked at a mile, or unlimited distance, by similar cylinders placed at the end and intermediate parts of a ¼ in. gutta serena conductor.
RAILWAY ENGINEERS unanimously admit, that by this powerful ENGINE TELEGRAPH each of the guards on a railway train may now work the steam-whistle, &c., INSTANTLY, as readily as the driver. (See Parliamentary Report, June, 1854. Southampton, Nov., 1853. C. R. PALMER.

STEAM STAMPS, 6-horse power, complete, from £120 to £180.
STEAM HAMMERS of any size at a short notice, fitted with the latest improvements in regulation. The stamps are in full operation, each one crushing 30 tons per day.

PORTABLE ENGINES AND BOILERS, complete, MOUNTED ON WHEELS, and of any power, for mining and other purposes, supplied at a few days' notice, under license from the patentees.
Address, MR. ISHAM BAGO, Mining Journal office, 26, Fleet-street.

MINING ENGINES TO BE LET ON HIRE, OR FOR SALE IMPORTANT TO ALL INTERESTED IN MINING PROPERTY.—Mining engines may be set to work without firing chimneys, or engine-houses, and the value of the mine tried at a small cost, by the HIRE OF MEDWIN AND HALL'S PATENT PORTABLE PUMPING AND WINDING ENGINES. Are strong, simple, mounted on broad wagon wheels, horse shafts, to remove at pleasure. Several are ready for immediate delivery, either to be let at rental or purchase, of 10, 12, 15, to 40-horse power.—Apply to Messrs. MEDWIN AND HALL, engineers, No. 92, Blackfriars-road, London, where terms and reports respecting the working of these engines for years may be obtained.

TO MINING COMPANIES, AND ALL CONNECTED WITH STREAM-POWER, PLANS, SPECIFICATIONS, WITH ESTIMATES OF ALL KINDS OF CORNISH MACHINERY, comprised of the most approved modern descriptions and economical principle, may be SEEN at the office of the Cornish Engineers and General Contractors, Cannon-street Chambers, Cannon-st., City, London.

ECONOMIC LIFE ASSURANCE SOCIETY.
The Right Hon. Sir T. FRANKLAND LEWIS, Bart., M.P.—CHAIRMAN.
HENRY FREDERICK STEPHENSON, Esq.—DEPUTY-CHAIRMAN.
ADVANTAGES.
THE LOWEST RATES OF PREMIUM ON THE MUTUAL SYSTEM.
THE WHOLE OF THE PROFITS divided among the assured every 5th year.
No charge for policy stamps, nor for service in the Economy or Militia corps.
Number of policies in force, 6000.
The Assurance Fund amounts to £1,340,000. Income upwards of £220,000 per annum.
The sum of £307,000 was added to policies at the last division, which produced an average bonus of 257 per cent. on the premiums paid.
Assurances effected in the current year, 1854, will participate in the profits in 1859.
For particulars, apply to Alexander Macdonald, secretary, No. 6, New Bridge-street, Blackfriars.

RAILWAY WAGONS.—WM. A. ADAMS, MIDLAND WORKS,
BIRMINGHAM.
BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.
IN STOCK—FOR SALE OR HIRE.

GRIFFIN AND HENSON, RAILWAY CARRIAGE AND
WAGON BUILDERS, SOHO, BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF IRONWORK FOR RAILWAY CARRIAGES AND WAGONS.

RAILWAY WHEEL AND AXLE WORKS.—
GEORGE WORSDELL AND CO., WARRINGTON, MANUFACTURERS OF EVERY DESCRIPTION OF HAMMERED IRON, TYRES, AXLES, &c.

THOS. SPENCER VULCAN IRONWORKS, WEST BROM-
WICH, STAFFORDSHIRE, MANUFACTURERS OF RAILWAY WHEELS AND AXLES, ROAD TYRES AND AXLES, ALL KINDS OF HAMMERED IRON FOR MARINE AND OTHER ENGINES, SHAFTS, AND HEAVY IRONWORK.—SOLE MAKER OF CAMBER'S PATENT WROUGHT-IRON RAILWAY WHEELS.

NORRIS'S PATENT RAILWAY CHAIR COMPANY beg to draw the attention of railway companies and engineers to NORRIS'S PATENT RAILWAY JOINT CHAIRS. This patent has received the unqualified approbation of some of the most eminent engineers of the day, as the most effective, economical, and perfect joint in use at the present time. The simplicity of its construction is such as will allow of its application to any line of railway, without causing the slightest hindrance to the ordinary traffic during the time that it is being laid down.

The saving in the preservation of the permanent way and rolling stock by the application of Norris's Patent is incalculable; and wherever adopted must very considerably decrease working expenses.

To railway companies, having old and bad roads, the principle is particularly advantageous, as its application will not only restore the road to a perfectly safe and serviceable state for many years, but, at the same time, bring into efficient use all the old and broken chairs.

To the railway world in general it is of the greatest value, as it admits of the easiest locomotion, and is most simple and economical in principle.
Every information will be given, and models forwarded for inspection, on application to the manager, at the offices of the company, Wolverhampton.

THE RAILWAY CARRIAGE COMPANY beg to inform the public they have REMOVED from Bromsgrove Station to their new works at OLD-BURY, near BIRMINGHAM, where, from their increased size and mechanical means, they are enabled to execute the largest orders with the greatest promptitude, and with all the facilities of communication, which may be addressed to the firm, and not to individuals, to ensure immediate attention.

TO ENGINEERS AND ROILER MAKERS.
In consequence of the LOW PRICE at which I am able to SELL MY PATENT SOLID BRASS TUBES, several unscrupulous persons, who are not able to compete with me, have made all kinds of FALSE REPORTS, with the view to prejudice consumers. Among other things, they state "that my tubes are heavier than ordinary brass tubes of the same thickness, and that, therefore, though sold at a low price per lb., they are dearer in the end, as there is a greater number of pounds in a tube." I, therefore, consider it right to CAUTION CONSUMERS against such IMPOSITION, and to inform them that the MATERIAL I USE IS NOT HEAVIER than any other brass; and, in order to guard against any mistake, purchasers are requested, when ordering tubes, to state the weight per foot they require them, as well as the gauge, and no charge will be made for any excess over and above such weight.
French Walls, near Birmingham, Sept. 10, 1854. G. F. MONTGOMERY.

NOTTINGHAM.—ORIGINAL STEAM-ENGINE AND HY-
DRAULIC PRESS MANUFACTORY, RUTLAND FOUNDRY (Established 35 years).—Orders received and promptly executed for Condensing Engines; High-pressure, Standard, and Beam Engines; Portable Engines, from 4 to 30-horse power, expressly adapted for saw mills, quartz crushing, pumping, winding, and general mining and contract purposes.—JAMES ORANGE, Granby-street.
Agent: W. J. TURNER, engineer, 32, Crutchedfriars, London.

MESSRS. JOHNSON AND CO., LITCHURCH WORKS, DERBY, having their PATENT PROCESS OF MOULDING IN FULL OPERATION at the above works, beg to call the attention and inspection of the casting trade to the very important results obtained, both as to SAVING IN COST OF MOULDING and the QUALITY OF THE CASTINGS produced, the former being found from 30 to 50 per cent., after 18 months' experience; according to the class of work, and the latter, even in unskilful hands, is of a higher character than can be accomplished by the most skilful workmen by the old system.—LICENSEES LET.

IMPORTANT TO IRONMASTERS.—A LARGE QUANTITY OF IRON ORE ON THE MULGRAVE ESTATE, near Whitby, is now READY TO BE LET. This immense seam runs for about five miles along the cliffs facing the German Ocean, is from 8 to 15 feet in thickness, and is allowed by competent authority to be much the richest ironstone yet discovered in Cleveland. It is within 16 miles (by sea) of Hartlepool, and 20 of Middlesbrough; the above locality is now celebrated for the manufacture of iron. The seam will be divided so as to suit customers, and further information may be obtained on application to Mr. KEAN, Lythe Hall office, near Whitby, Lythe Hall, May 29, 1854.

TIMBER.—TO RAILWAY COMPANIES, CONTRACTORS, BUILDERS, &c.
MACKINNON AND CO., COMMISSION AGENTS, MONTREAL.
CANADA (and Agents in North America for Messrs. William Fairbairn and Sons, Manchester, &c.), are prepared to make SELECTIONS AND PURCHASES IN CANADA OF OAK, ELM, ASH, BIRCH, RED AND WHITE PINE, HEMLOCK, SPRUCE, &c., either in bulk or specified lengths, or cut to any scantling, such as suitable for railway sleepers, railway wagon and carriage manufacture, flooring and roofing purposes, sheet piling, &c., thereby saving waste, freight, and additional cost of cutting-up in England.
MACKINNON AND CO. are also prepared to STATE PRICES (in sterling money) of above, delivered free on board at Montreal or Quebec.
Montreal, July 17, 1854.

REFERENCE.—MESSRS. W. FAIRBAIRN AND SONS, MANCHESTER.
Messrs. LAURIE, CLARK, and Co., Liverpool.

PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL WAS AWARDED TO THE MANUFACTURERS OF THE ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in blasting operations, that for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a third award made to its originator, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.
Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall.

SAFETY FUSE.—MESSRS. WILLIAM BRUNTON AND CO., PEN-
HALLICK, near REDBUTH, CORNWALL, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe. Messrs. BRUNTON & CO. are at all times PREPARED TO EXECUTE UNLIMITED ORDERS FOR SAFETY FUSE, and to supply the same to MANUFACTURERS, who warrant that it will prove equal to, if not better, than any to be procured elsewhere.

ASSAYING AND CHEMICAL ANALYSIS.—AN ILLU-
STRATED CATALOGUE OF APPARATUS AND CHEMICALS suitable for these purposes. Postage 1d.
JOHN J. GRIFFIN, F.R.S., Chemist and Mineralogist, 10, Finsbury-square, London.

POPULAR MINERALOGY.—A COLLECTION OF SPECIMENS of the most important MINERALS and METALLIC ORES, accurately named. Each in a neat tray, and the whole in a mahogany cabinet with folding doors. Price 2s. 12s. 6d. A similar collection of GEOLOGICAL SPECIMENS, at the same price. Also, many collections of greater extent, both with and without cabinets.
JOHN J. GRIFFIN, F.R.S., Chemist, Mineralogist, and Optician, 10, Finsbury-square, London.

FIRST LESSONS IN PRACTICAL CHEMISTRY.
In 8vo, with 100 woodcuts, price 2s.

CHEMICAL RECREATIONS: A POPULAR HANDBOOK OF
EXPERIMENTAL CHEMISTRY. By JOHN J. GRIFFIN, F.R.S. The Tenth Edition. First Division—Elementary Experiments in General and Analytical Chemistry.—JOHN J. GRIFFIN, No. 10, Finsbury-square, London, of whom may be had PORTABLE CABINETS OF CHEMICAL APPARATUS, adapted to the experiments described in *Chemical Recreations*, at 10s., 31s. 6d., 42s., and 52s. 6d.

ASSAYING.—CITY SCHOOL OF CHEMISTRY AND ASSAY OFFICE, DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT. Conducted by JOHN MURCELL, F.R.S., Author of *Manual of Practical Assaying*, *Manual of Agricultural Analysis*, *Treatise on the Assayer's Art*, *Metallurgical Papers*, &c. ASSAYS AND ANALYSES OF MINERALS, METALS, and every manufacturing product.
SPECIAL INSTRUCTION IN ASSAYING AND CHEMISTRY for gentlemen intending to proceed to the colonies.
All enquiries respecting scale of fees, &c., to be addressed as above.

TO GAS COMPANIES.—CLAY PURIFICATION OF GAS.
Nuchap process has just been discovered for freeing gas from ammonia; and the removal of the sulphuretted carbon (the greater nuisance of gas burning) has been given up in a new CLAY REMOVAL BOTH THESE IMPURITIES; and when taken from the purifiers the bluish-purple of carbon is visible, completely blackening the clay. The illuminating power of the gas is increased in proportion to its thorough purification.
THE PROPRIETORS OF THIS PATENT are now READY TO GRANT LICENSES for its use.—Terms and directions for its employment may be obtained from Mr. JOHN WETTER, agent to the patentees, Gas-works, Wakefield.

IMPROVED PATENT WIRE ROPE.—MR. ANDREW SMITH, the ORIGINAL INVENTOR OF WIRE ROPE, LIGHTNING CONDUCTORS, AND SUBMARINE TELEGRAPHS, solicits the attention of the public to his IMPROVED PATENT MANUFACTURE, as the best and cheapest, having obtained his sixth patent since 1835.
Office, 60, Prince-street, Leicester-square, London.

NEW PATENT ACT, 1852.—MR. CAMPIN, having advocated Patent Law Reform before the Government and Legislature, and in the pages of the *Mining Journal*, &c., is now READY TO ADVISE AND ASSIST INVENTORS IN OBTAINING PATENTS, &c., under the NEW ACT.
The Circular of Information, gratis, on application to the Patent Office and Design Registry, 156, Strand.

FURNACES AND COAL OVENS.
BARRERS, CONFECTIONERS, and other COAL OVEN PROPRIETORS, are respectfully informed that COPIES of the REPORT made by the COMMITTEE OF DIRECTORS AND GUARDIANS OF THE POOR FOR ST. MARTYLBONE, and of TESTIMONIALS from the trade in favor of LEE STEVENS'S system of SMOKE PREVENTION AND ECONOMY OF FUEL, may be OBTAINED from the patentee.

Copies of official and other reports, and of testimonials in favor of the invention, as applied to steam boilers, breweries, distilleries, &c., and as a means of saving space, &c., with information respecting licenses to manufacturers or use the Patent Smokeless Furnaces, also given by Mr. JOHN LEE STEVENS, at the offices, No. 1, Fish-street-hill, City, London. And where may be seen a list of numerous references, comprising eminent engineering, manufacturing, and other firms, constantly using this well-established system in the metropolitan districts and the provinces generally.

LEE STEVENS'S FURNACE REFERENCE.
As the value of inventions can be best estimated by the successful extent of their application, Mr. LEE STEVENS avails himself of permission to refer to the important LIST of MANUFACTURERS, BREWERS, SOAP MAKERS, CHEMISTS, DYERS, PRINTERS, CONFECTIONERS, BAKERS, and OTHERS, in proof of the PRACTICAL UTILITY of his SYSTEM OF SMOKE PREVENTION AND ECONOMY OF FUEL, ADAPTED TO ALL VARIETIES OF FURNACES, published in the *Mining Journal* of the 16th, and the *Times* of the 18th September, and filed at his offices, 1, Fish-street-hill, City.

HOW TO SUBDUCE SMOKE: BEING POPULAR INFORMATION ON VARIOUS PRACTICABLE MEANS, WITH COMPARATIVE RESULTS, AND A FEW WORDS ABOUT FUEL. Including an examination of the respective systems adopted by Jukes, Hazeldine, Frideaux, Bristow and Atwood, Chamber, Lee Stevens, Robertson and Jarrard.
London: Eddingham Wilson, 11, Royal Exchange; Edward Stanford, 4, Chancery-lane. Price Sixpence; and remitted by post on receipt of eight postage stamps.

SMOKE.—MR. BOOTH, CIVIL ENGINEER, No. 9, PORTLAND PLACE, WANDSWORTH ROAD, LONDON, has SUCCEEDED IN DESTROYING SMOKE under the most DIFFICULT ENGINE AND OTHER BOILERS. A saving of 5s. per week has been made in an engine boiler of 25-horse power. References can be given to all parties who desire to have their boilers under the same system.

SMOKE PREVENTION (OFFICE OF REFERENCE FOR PATENTIES AND THE PUBLIC, 17 and 18, CORNHILL).
Messrs. NOURSE AND CO., having several BRITISH AND FOREIGN PATENTS for the above purpose, some of them being peculiarly simple and effective, are ready to UNDERTAKE THE PREVENTION OF SMOKE IN FURNACES, BOILERS, and COPPERS of all kinds and sizes. An experienced practical engineer will, if required, superintend the work.

PREVENTION OF SMOKE, AND IMPROVED COMBUSTION OF FUEL IN FURNACES (WOODCOCK'S PATENTS).—The only inventions which thoroughly PREVENT ALL SMOKE with perfect certainty, even during draught and stoking. They are very inexpensive, greatly increase the ordinary draught, facilitate the formation of steam, are subject to no extra wear and tear, and effect a large SAVING IN FUEL.—For particulars and terms, apply to Mr. WOODCOCK, Earl's-court Brewery, Brompton, where these furnaces may be seen at work on Tuesday, Thursday, and Saturday, between the hours of Ten and Four.

SMOKELESS FURNACE, COMPLETE COMBUSTION, AND ECONOMY.—The legislative enactment for the suppression of the smoke nuisance being now in operation, rendering it compulsory on the part of furnace proprietors to adopt the best means for its abolition, C. J. FOX calls the attention of the scientific public to the PLAN PATENTED by Messrs. ELMESLIE and SIMPSON, of which he is the SOLE LICENSEE, as being THOROUGHLY EFFICACIOUS, causing a LARGE SAVING IN FUEL, and as one of the most SIMPLE and ECONOMICAL in first cost, and in the public eye. It can be fixed in a period of no time exceeding a day, and without any disturbance to the furnace.—Full particulars may be obtained of C. J. FOX, engineer, 4, Pickard-street, City-road, where testimonials of its complete success may be seen.

BRICK MAKING MACHINES.
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HOLLOWAY'S PILLS A CERTAIN REMEDY FOR DEBILITATED CONSTITUTIONS, LOSS OF APETITE, AND LOWNESS OF SPIRITS.—Mr. Richard White, of No. 5, Abing-square, Manchester-road, Bradford, was afflicted for several months with a bodily weakness, loss of appetite, and lowness of spirits, and for a long time a patient at the dispensary, but derived no benefit whatever, and was told by the medical attendant that he was in a deep decline, medicine being of no further use to him. About this time he was recommended to try HOLLOWAY'S PILLS, and this invaluable medicine speedily effected a perfect cure, and he has ever since enjoyed the best of health, now nearly ten years.—Sold by all druggists, and at Professor Holloway's establishment, 214, Strand, London.

HOLLOWAY'S PILLS A CERTAIN REMEDY FOR DEBILITATED CONSTITUTIONS, LOSS OF APETITE, AND LOWNESS OF SPIRITS.—Mr. Richard White, of No. 5, Abing-square, Manchester-road, Bradford, was afflicted for several months with a bodily weakness, loss of appetite, and lowness of spirits, and for a long time a patient at the dispensary, but derived no benefit whatever, and was told by the medical attendant that he was in a deep decline, medicine being of no further use to him. About this time he was recommended to try HOLLOWAY'S PILLS, and this invaluable medicine speedily effected a perfect cure, and he has ever since enjoyed the best of health, now nearly ten years.—Sold by all druggists, and at Professor Holloway's establishment, 214, Strand, London.

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Shares.	Miners.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.	Shares.	Miners.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5120	Alfred Concess (copper), Philadelph.	£1 10s	21 1/2	21 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Alfred Concess (copper), Philadelph.	1 1/2	21 1/2	21 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Alfred Concess (copper), Philadelph.	1 1/2	21 1/2	21 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1224	Baleswidden (tin), St. Just	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Bat Holes, Wetherham, Salop.	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
4000	Bellford United (copper), Tavistock	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Black Craig (lead), Kilmadrigg, Perthshire	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
124	Boswell and Wheel Castle	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
200	Bottalack (tin, copper), St. Just	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1000	Bryntal, Llanidloes, Montgomeryshire	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Callington (lead, copper), Callington	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1000	Carn Brea (copper, tin), Illogan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
10000	Castle Slate Quarry, Dolwyddelan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
250	Comford (copper), Gwynnapp, Cornwall	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
250	Condurow (copper, tin), Camborne	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
128	Cornwall (lead), Cardigan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1024	Devon Great Consols (copper), Tavistock	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
13000	Dhurode (copper), Ireland	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
672	Ding-Dong (tin), Gual	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
179	Dolcoath (copper, tin), Camborne	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
2800	Drake Walls (tin, copper), Calstock	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
300	East Darren (lead), Cardigan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
128	East Pool (tin, copper), Pool, Illogan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
128	East Wheel (lead), Newlyn	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1024	East Wheel Margaret (tin, copper)	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1200	Eam Mining Company, Derbyshire	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
404	Powys Consols (copper), Tywardreath	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
2340	Foxdale, Isle of Man	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
320	General Mining Co. for Ireland (cop. lead)	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
3000	Goginan (lead), Cardigan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1024	Goginan (lead), Cardigan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
30000	Great Consols (copper), St. Austell	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
17520	Great Polgoth (tin), St. Austell	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
119	Great Work (tin), Gernoe	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1024	Herodfoot (lead), near Liskeard	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
6000	Hingston Down Consols (copper), Calstock	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1000	Holmhead (lead, copper), Callington	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
2000	Holyford (copper), near Tipperary	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
76	Jamaica (lead), Mold, Flintshire	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
30000	Kennar and West of Ireland	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1048	Kennar (copper), Breage	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
786	Kirkcubright (lead), Kirkcubright	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
30000	Lockmore (copper), Tipperary, Ireland	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
30	Luxury Mining Company, Isle of Man	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Lewis (tin, copper), St. Erth	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
160	Levant (copper, tin), St. Just	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
400	Liaburne (lead), Cardigan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
320	Maehno Slate and Slab Company	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
160	Marke Valley (copper), Caradon	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
6000	Mendip Hills (lead), Somerset	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Merrilyn (lead), Flint	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
30000	Mining Co. of Ireland (copper, lead, coal)	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Nantlle Vale (lead), Llanfyllin	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
470	Newtown Consols (copper), Co. Down	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
200	North Pole (copper, tin), Penryn	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
140	North Rose (copper), Camborne	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
6000	North Wheel Basset (copper, tin), Illogan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1128	North Wheel Croft (copper), Illogan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
6400	Par Consols (copper), St. Blazey	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
500	Peak United (lead), North Derbyshire	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
160	Perran St. George (cop. tin), Perranarabute	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
300	Phoenix (copper, tin), Llanfyllin	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1000	Pobber (tin), St. Agnes	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
560	Providence Mines (tin), Uny Lelant	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1918	Rix Hill (tin), Tavistock	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
256	South Caradon (copper), St. Cleer	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
9000	South Tamar (silver-lead), Beerferris	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
256	South Tamar (copper), Redruth, Cornwall	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
248	South Wheel (copper), Illogan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1024	St. Angharad (tin), St. Just	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1024	St. Angharad (tin), St. Just	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
94	St. Ives Consols (tin), St. Ives	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
1000	Stray Park and Camborne Vein (copper)	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
9000	Tamar Consols (silver-lead), Bealston	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
6000	Tincroft (copper, tin), near Pool, Illogan	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
2018	Trehan (silver-lead), Menheniot	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
5000	Trehan Consols (copper), Redruth	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
572	Trehan Consols (tin), St. Ives	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
72	Trevelan (copper), Gwynnapp, Cornwall	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
120	Trevelan (copper), Gwynnapp, Cornwall	1 1/2	11 1/2	11 1/2	1 1/2	1 1/2	18000	Perran and Leisure Union	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
120	Trevelan (